Tracking counts

Column 420

by Sarah Locke

Every winter, with each fall of snow, new stories are written across the surface of the boreal forest. From the single line of tracks left by a trotting coyote to the broad paw prints of a lynx, much can be learned from signs left in the snow.

Trappers and other people living on the land have long valued this information, and kept their own records of what they observe each winter. Some Yukon biologists think that tracking is also very useful as a scientific tool, and would like to see it used more often for monitoring wildlife populations in the North.

Animals tracks can be used to monitor wildlife populations in the North.
(photo: Laura Prugh)

"Track counts are a trend tool," says Liz Hofer, who has been tracking coyotes, lynx, and other animals in the Kluane Region for almost two decades.

While track counts can only give limited information about the number of animals in a particular area, they can say a lot about how those numbers change over time.

Hofer brings the sensibilities of a scientist and a trapper to this subject. A biologist by training, she had trapped for a decade in the Kluane area before she started working with the Kluane Boreal Forest Ecosystem Project, the intensive research effort that wrapped up in 1996.

Working as a carnivore technician, this project gave her the chance to do the type of research she had often dreamed of, as had other trappers. "We used to sit around and talk about how neat it would be to just follow the animals around," she says. "The things I did as a carnivore biologist were the same kinds of things that I had done as a trapper."

"Tracking is the kind of thing that trappers do instinctively. You have to know where the animals are and in what quantities, so you instinctively register their tracks and signs."

For the next ten years, she and Mark O'Donoghue, now the regional biologist in Mayo, counted tracks along pre-set routes after every fresh snowfall. Hofer also had the chance to track individual animals, learning more about what they hunt when

their favourite prey -- the snowshoe hare -- is not abundant.

While chances to do such intensive research are rare, Hofer and O'Donoghue think that track counts can be used in other parts of the North for monitoring wildlife. They want to standardize tracking as a management tool.

"It is non-invasive and it is available to people over a long period of time. And the main tool -- which is snow -- is free," says Hofer.

"The beauty to me is that tracking is winter-oriented, and winter is what life is all about here. It is the limiting factor in our ecosystem. You have to be able to do well in winter to do well living here, so learning about this time is important."

Hofer says the Kluane Boreal Forest Ecosystem Project gave her and O'Donoghue the chance to refine the use of tracking as a tool for monitoring wildlife populations. "When we started, the use of track counts was pooh-poohed by park managers and wildlife agencies, but that was mainly because of the way that it was done," she says.

Over time, their counts produced data that helped show the myriad interrelationships among animals in the boreal forest, and how they change with the ebbs and flows of the snowshoe hare cycle. Hofer particularly credits Charles Krebs, the leader of the massive Kluane project, for their success.

"He always said record everything that you see because you never know what will prove useful," she said.

"When you go out and count tracks, you count everything. Not just lynx and coyotes, but other carnivores and herbivores as well. Life is about food, so if you are studying carnivores you need to know about their prey."

While the Kluane Project has wrapped up, track counts are still being conducted in Kluane National Park as well as in Mayo and Vuntut National Park. In Mayo, track counts have been used for the last five winters to monitor carnivores such as lynx, weasels, and foxes.

In Vuntut National Park, wolverine populations are being monitored. Listed as a species of special concern in western Canada, wolverine populations are considered to be healthy in the Yukon, and the tracking work is meant to ensure that they stay that way. Wolverine fur is highly prized in the North because of the way that it resists frost.

Track counts are still conducted in Kluane National Park as part of a long-term ecological monitoring program. Hofer says this work has had an unexpected benefit -- building relationships in the community. On each count, a member of the Champagne-Aishihik First Nation and a staff person with the park spend time together out on the land, something they might not do otherwise.

O'Donoghue and Hofer have determined that 15 seems to be the magic number for the counts. If trackers can get out that number of times between November and April -- after a fresh fall of snow -- they can collect enough information to help monitor trends among animal populations.

Hofer thinks many community people already have the expertise needed to gather valuable scientific data through tracking, and it is work that many would enjoy as well.

"It strikes a chord with anyone who is interested in being out on the land."

For more information on tracking, contact Liz Hofer at elizabeth.hofer@lincsatmail.com.

Environment Canada
Pacific and Yukon Region